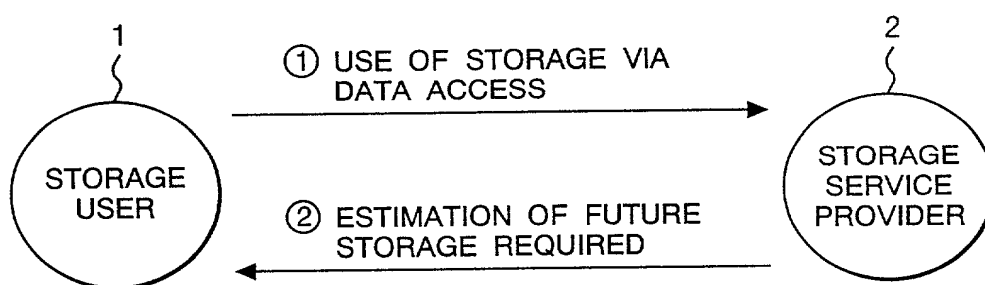
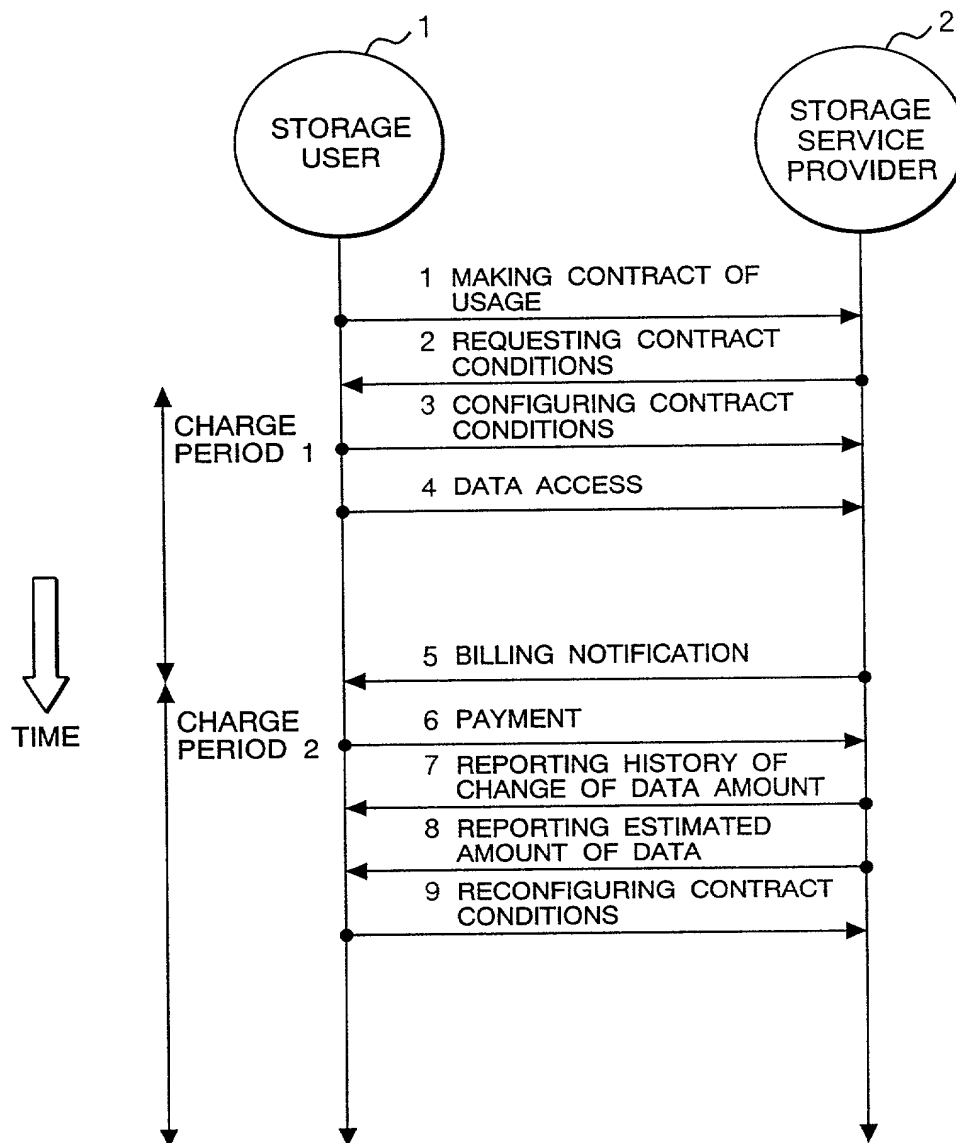


**FIG. 1**

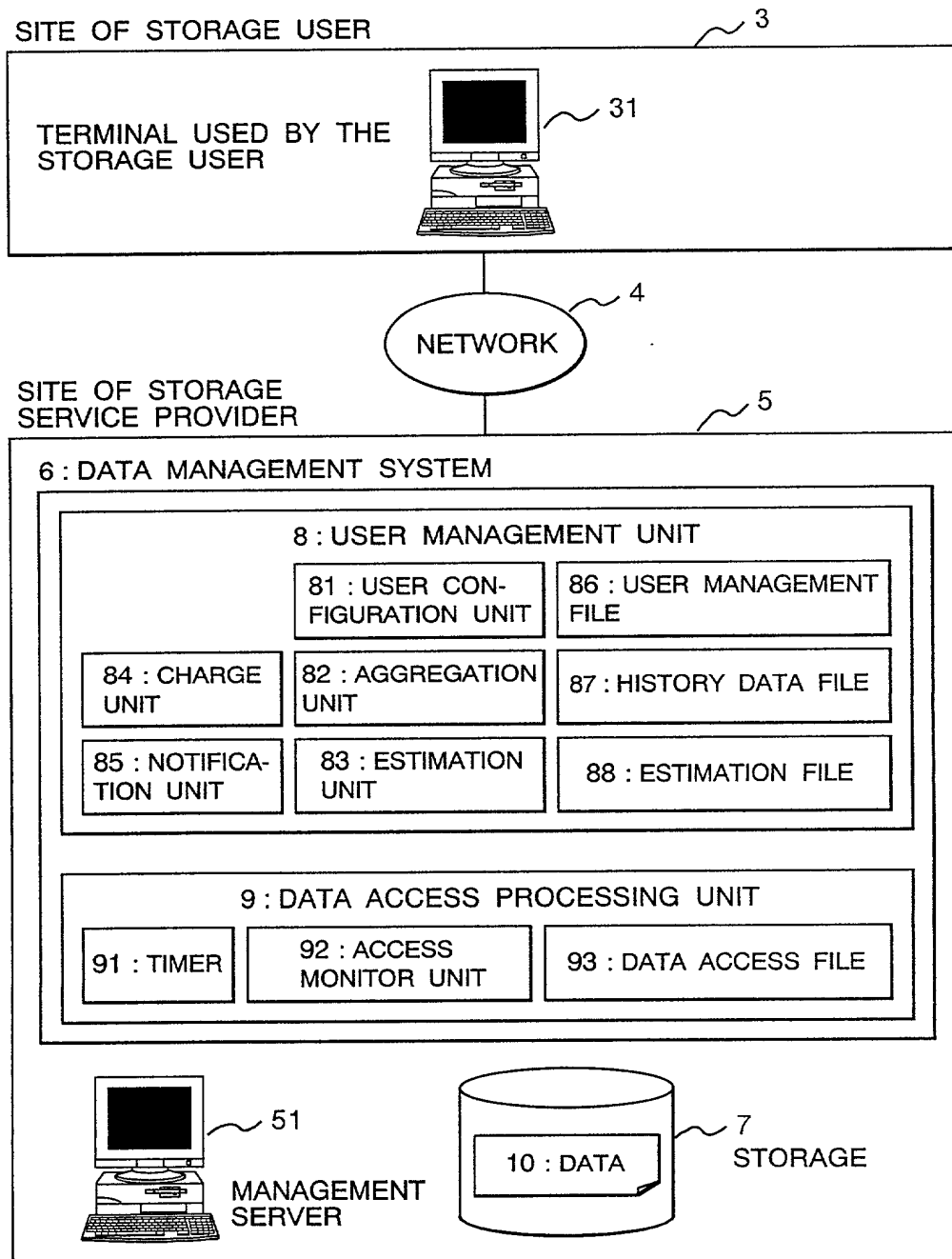


**FIG. 2**



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**FIG. 3**



102050 0200T000

FIG. 4

93 : DATA ACCESS FILE

STORAGE AREA	NAME OF DATA	AMOUNT OF DATA	ACCESS FREQUENCY	USER IDENQUENCY
1	1	300GB	100TIMES	A
1	2	200GB	100TIMES	B
1	3	200GB	100TIMES	C
2	4	200GB	10TIMES	D
⋮	⋮	⋮	⋮	⋮

USER IDENTIFIER	BILLING METHOD	AMOUNT CONTRACTED	ESTIMATION CONTRACT	BILLING PERIOD	AMOUNT TO BE REPORTED	AMOUNT ESTIMATED
A	FIXED	300GB	YES	MONTHLY	200GB	300GB
B	FIXED	200GB	NO	MONTHLY	200GB	500GB
C	SPECIFIC	30000 YEN	YES	MONTHLY	30000 YEN	30000 YEN
D	SPECIFIC	20000 YEN	NO	WEEKLY	10000 YEN	10000 YEN
⋮	⋮	⋮	⋮	⋮	⋮	⋮

USER IDENTIFIER	BILLING METHOD	AMOUNT CONTRACTED	ESTIMATION CONTRACT	BILLING PERIOD	AMOUNT TO BE REPORTED	AMOUNT ESTIMATED
A	FIXED	300GB	YES	MONTHLY	200GB	300GB
B	FIXED	200GB	NO	MONTHLY	200GB	500GB
C	SPECIFIC	30000 YEN	YES	MONTHLY	30000 YEN	30000 YEN
D	SPECIFIC	20000 YEN	NO	WEEKLY	10000 YEN	10000 YEN
⋮	⋮	⋮	⋮	⋮	⋮	⋮

FIG. 6

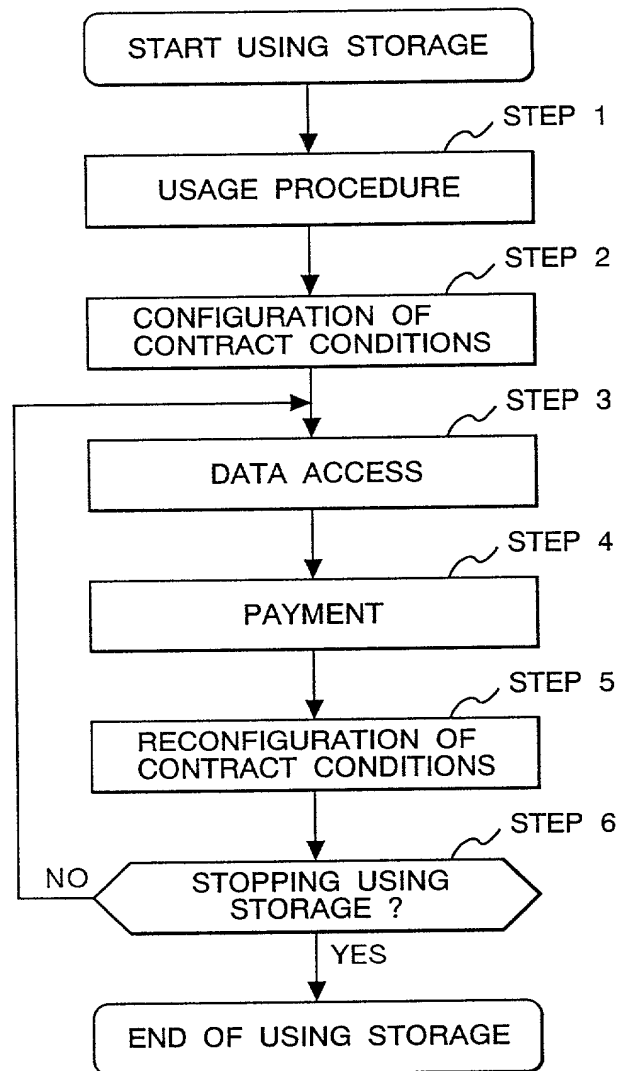
87 : HISTORY DATA FILE

USER IDENTIFIER	DATA	STORAGE AREA	NAME OF DATA	AMOUNT OF DATA
A	2000/01/1	1	1	100GB
A	2000/01/2	1	1	100GB
A	2000/01/3	1	1	110GB
A	2000/01/4	1	1	115GB
⋮	⋮	⋮	⋮	⋮

**FIG. 7****88 : ESTIMATION FILE**

USER IDENTIFIER	APPROXIMATE FORMULA	DATA ESTIMATION FOR NEXT BILLING DATA	DATE THAT CONTRACTED STORAGE BECOMES FULL	DATE THAT AMOUNT GAINED THE NOTIFICATION AMOUNT
A	$D=aT+b$	300GB	2001/02/15	2001/02/10
B	$D=cT+d$	500GB	2001/12/07	2001/12/07
C	$D=eT+g$	300GB	2001/03/20	2001/02/15
D	$D=hT+i$	200GB	2001/07/12	2001/05/03
:	:	:	:	:

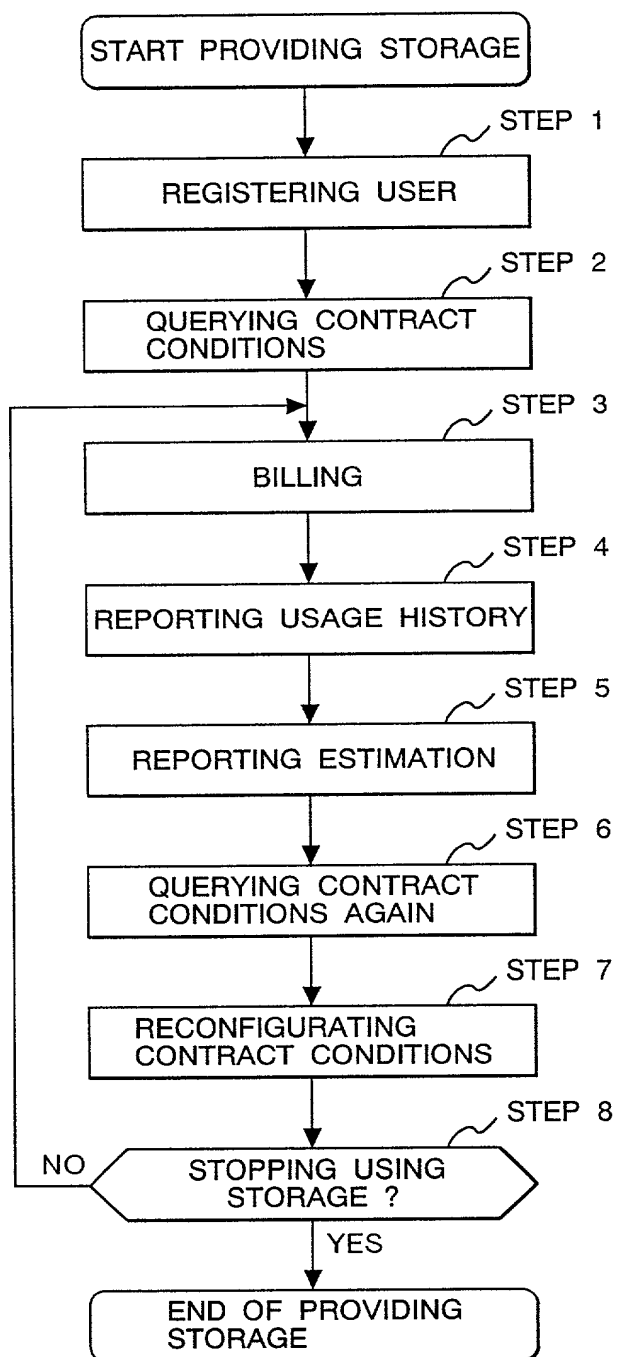
**FIG. 8**





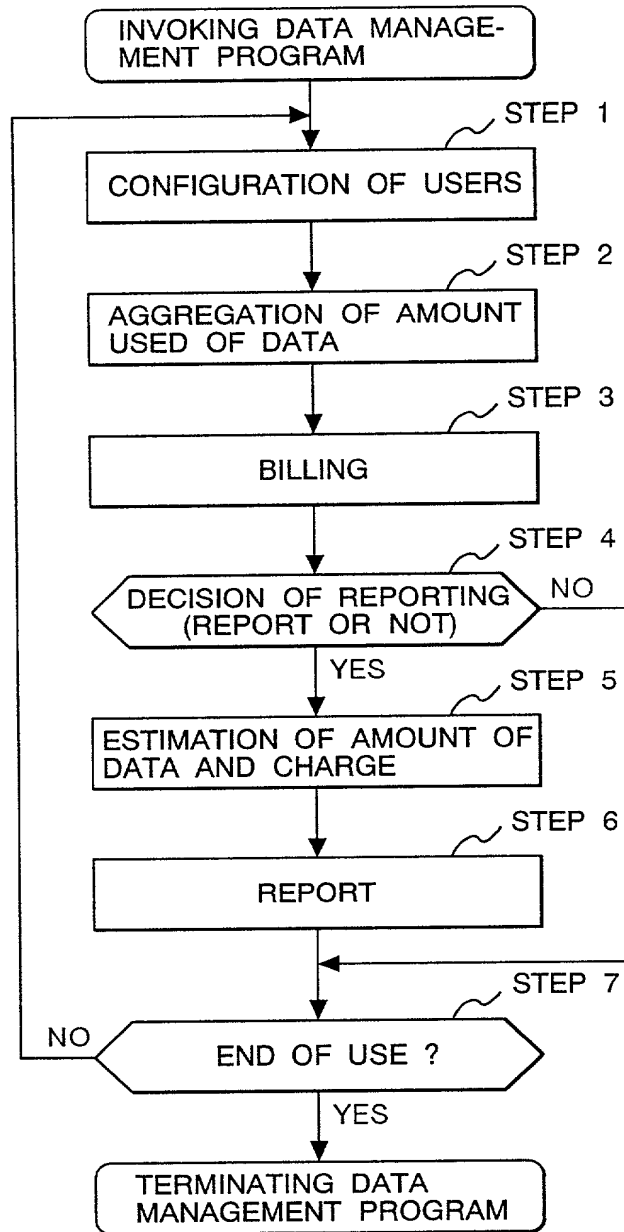
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**FIG. 9**



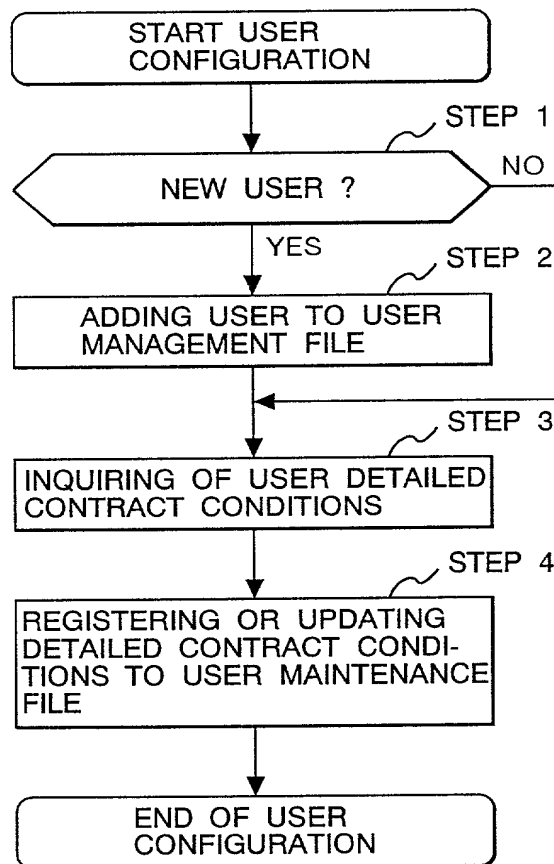
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**FIG. 10**



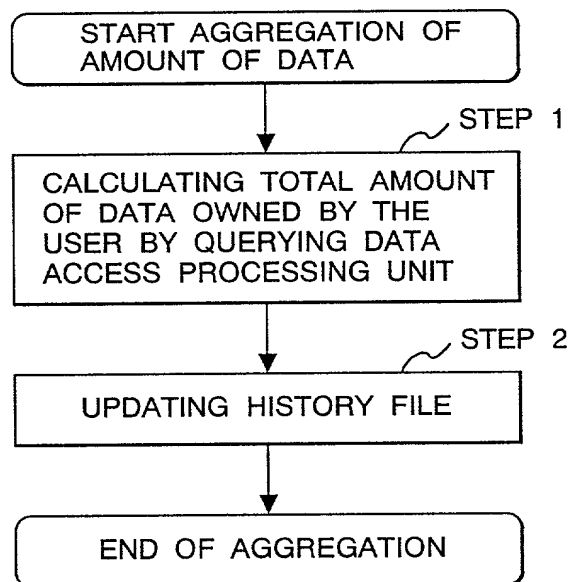
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**FIG. 11**



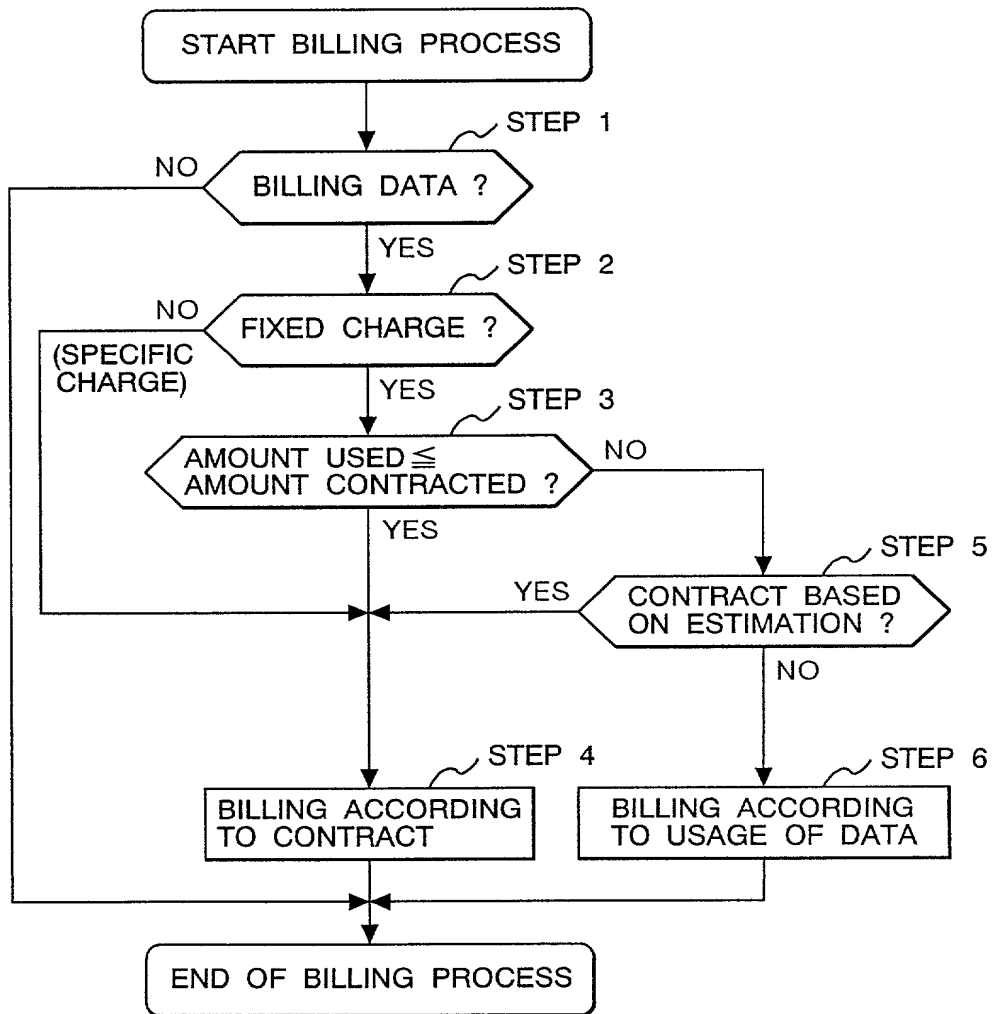
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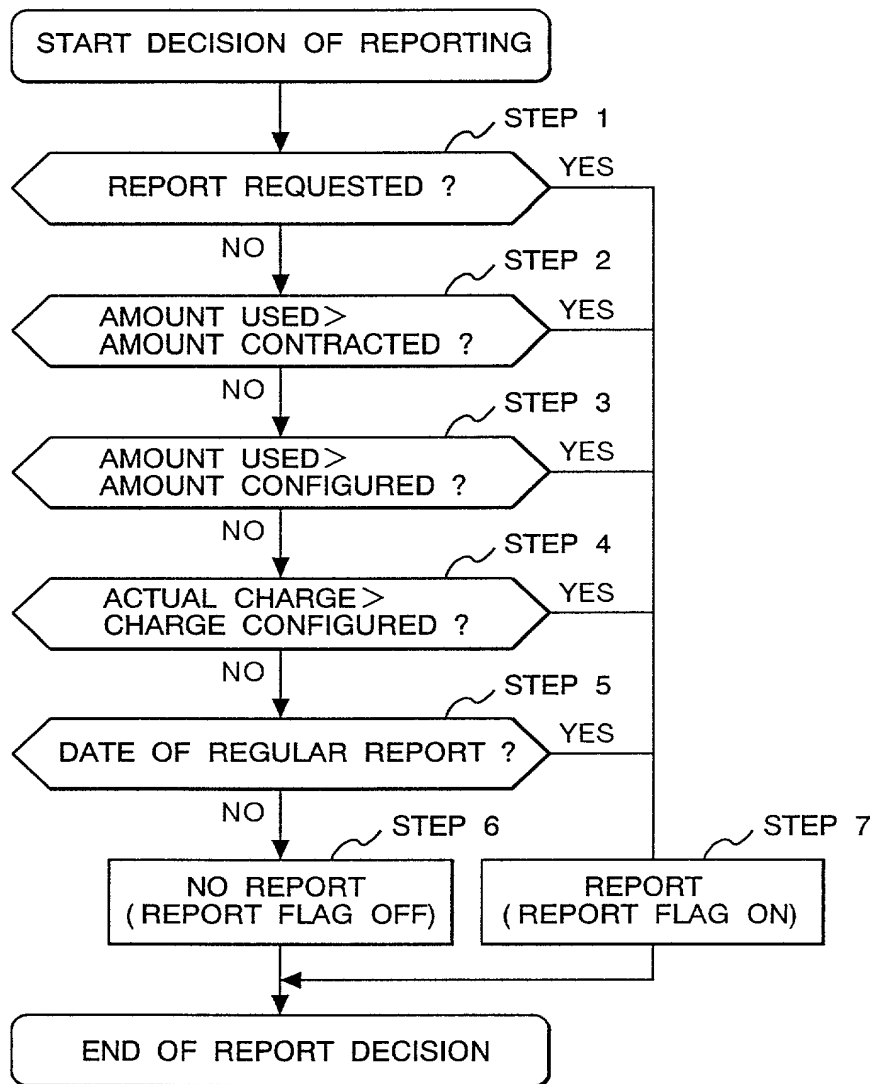
**FIG. 12**



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**FIG. 13**



**FIG. 14**

**FIG. 15**

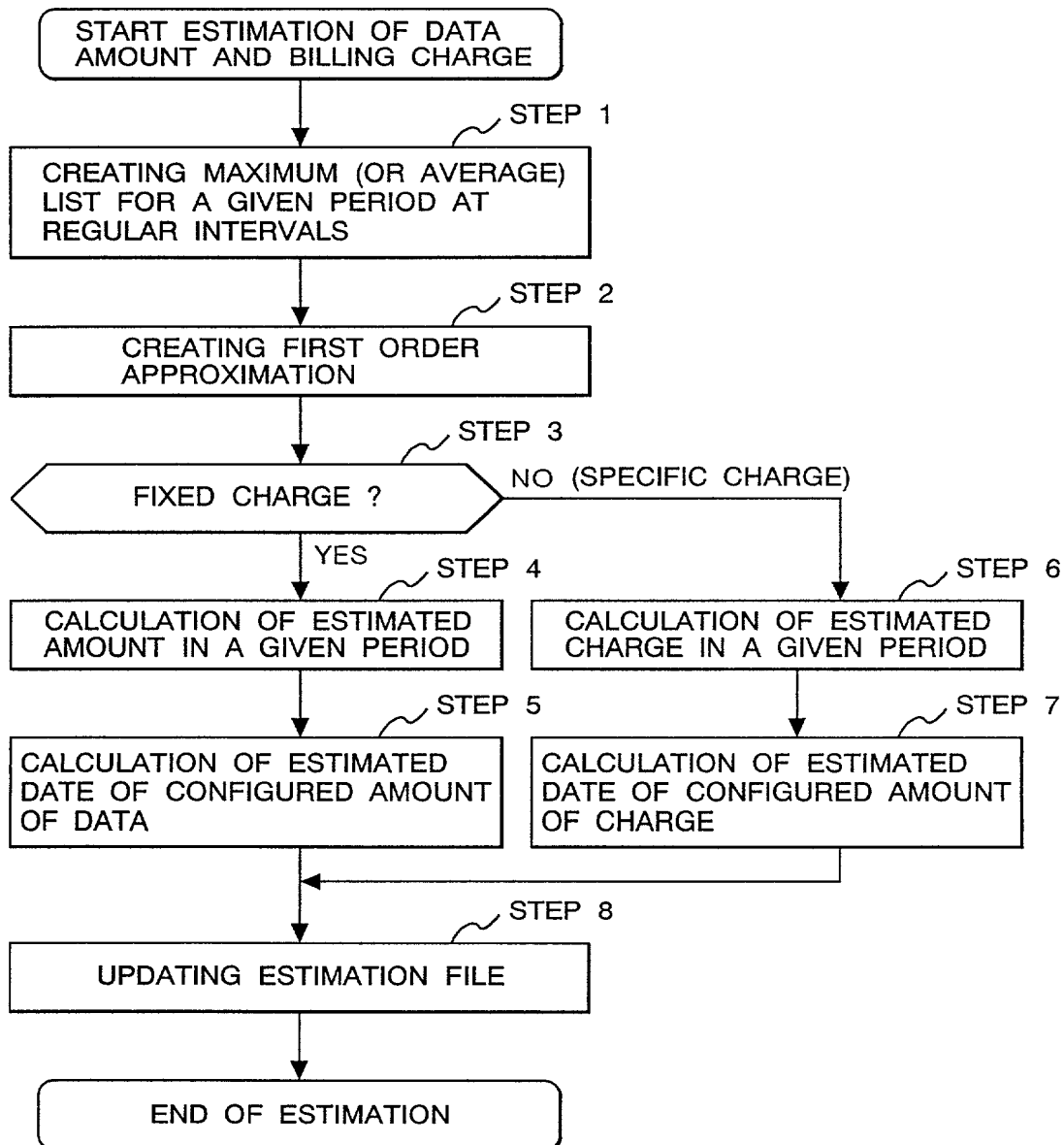


FIG. 16

260

MENU 1MENU 2MENU 3MENU 4

USER REGISTRATION

26012602

USER NAMEA

260326042605

BILLING METHODFIXEDSPECIFIC

260626072608

AMOUNT CONTRACTED300GB30000 YEN

260926102611

AMOUNT TO BE REPORTED200GB25000 YEN

261226132614

OPTION FOR EXCESS AMOUNTAVAIL-ABLEUNAVAIL-ABLE

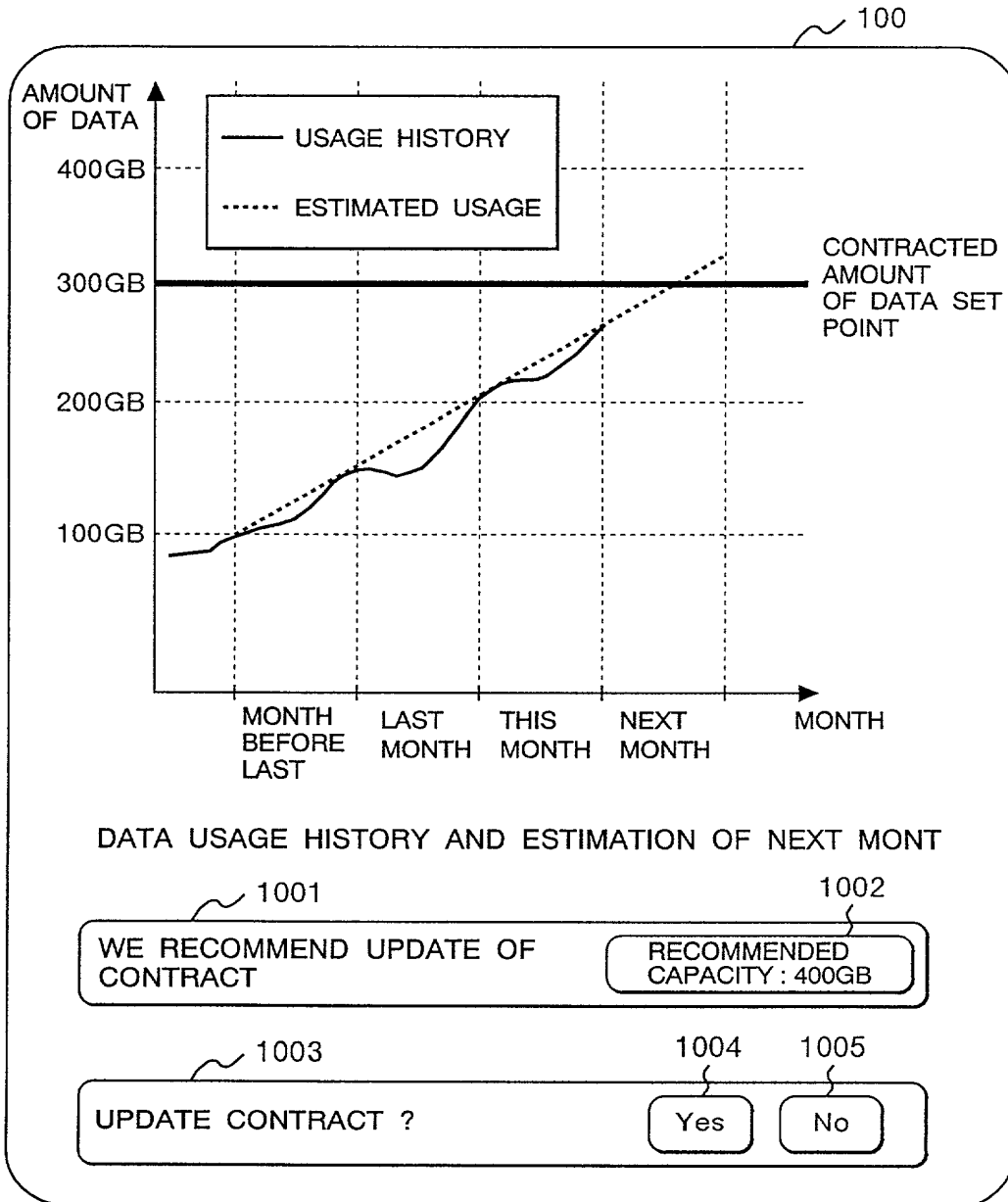
261526162617

TERMINATE CONFIGURATION ?YesNo



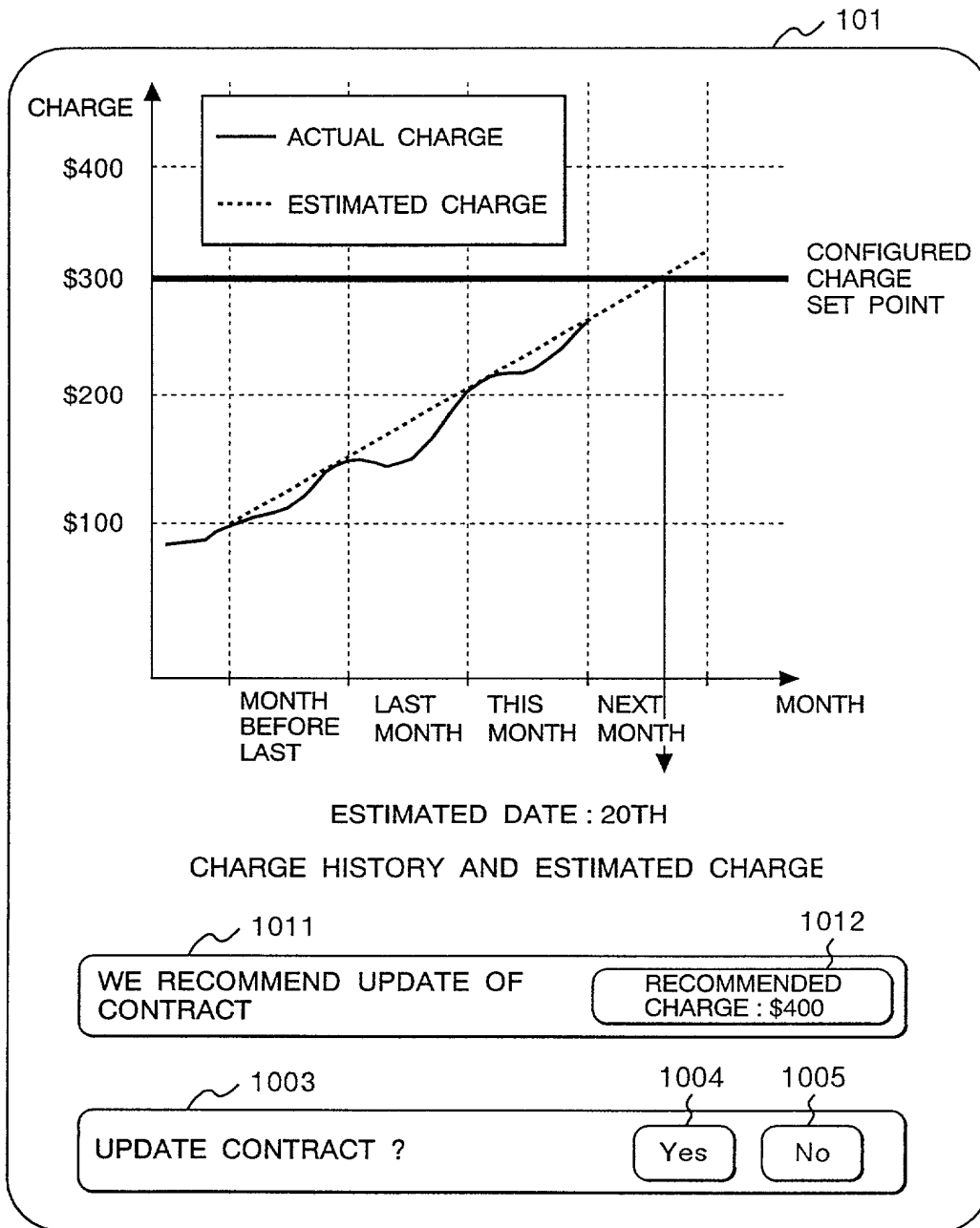
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**FIG. 17**

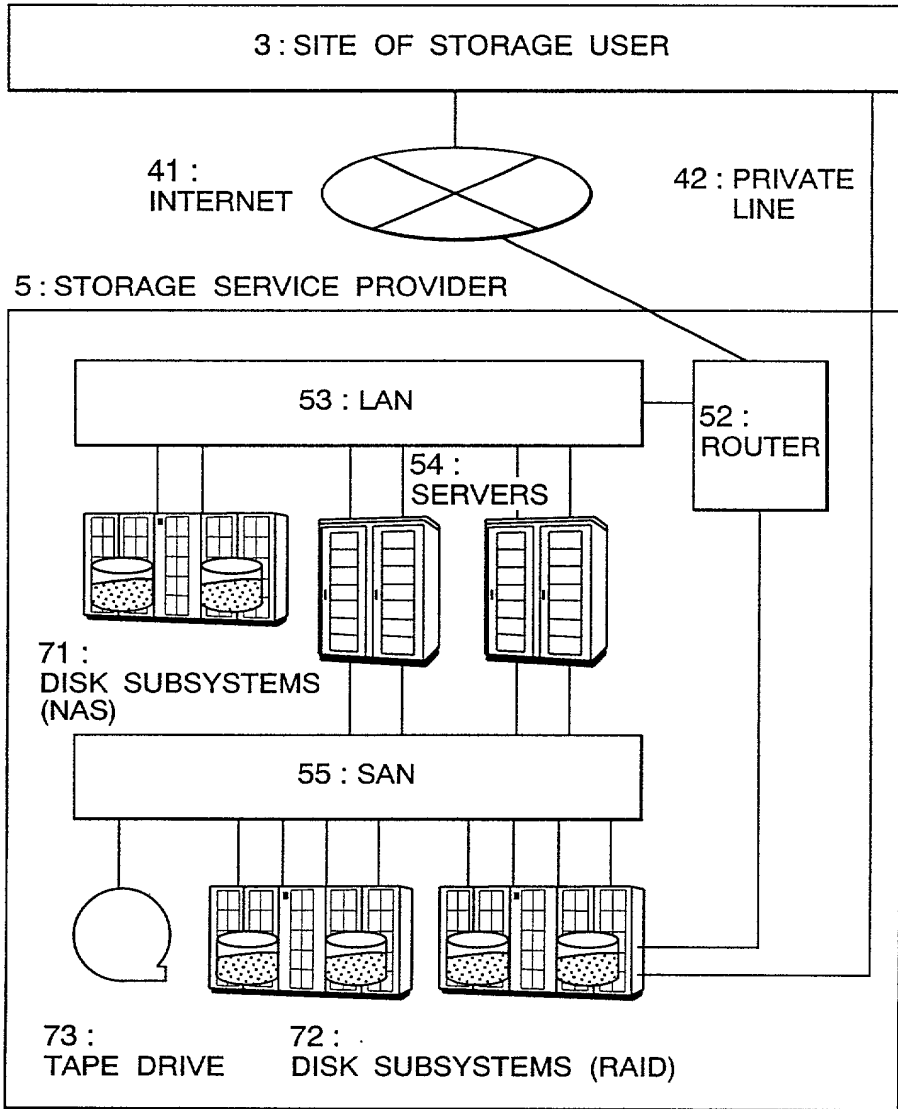


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**FIG. 18**



**FIG. 19**



**FIG. 20**

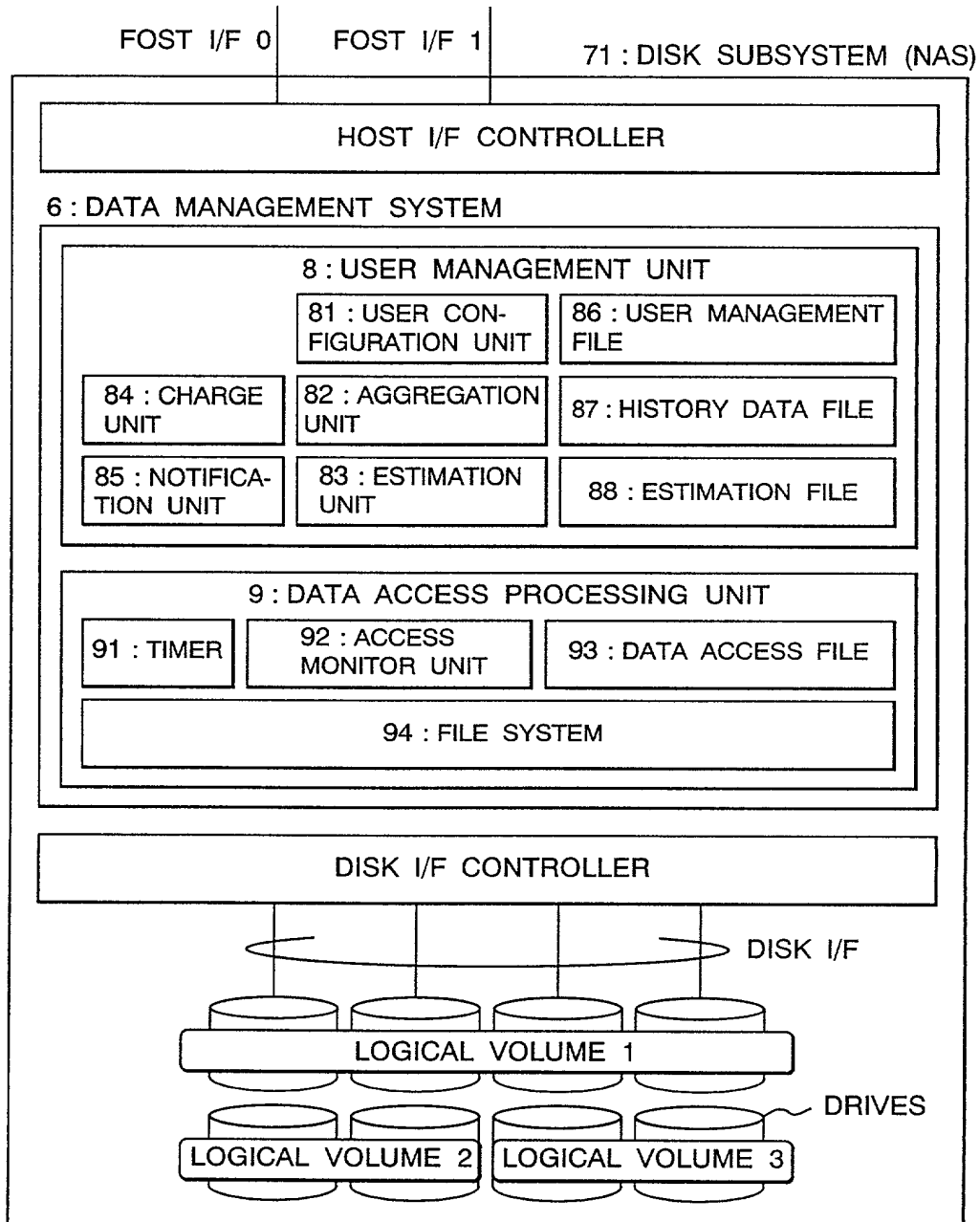
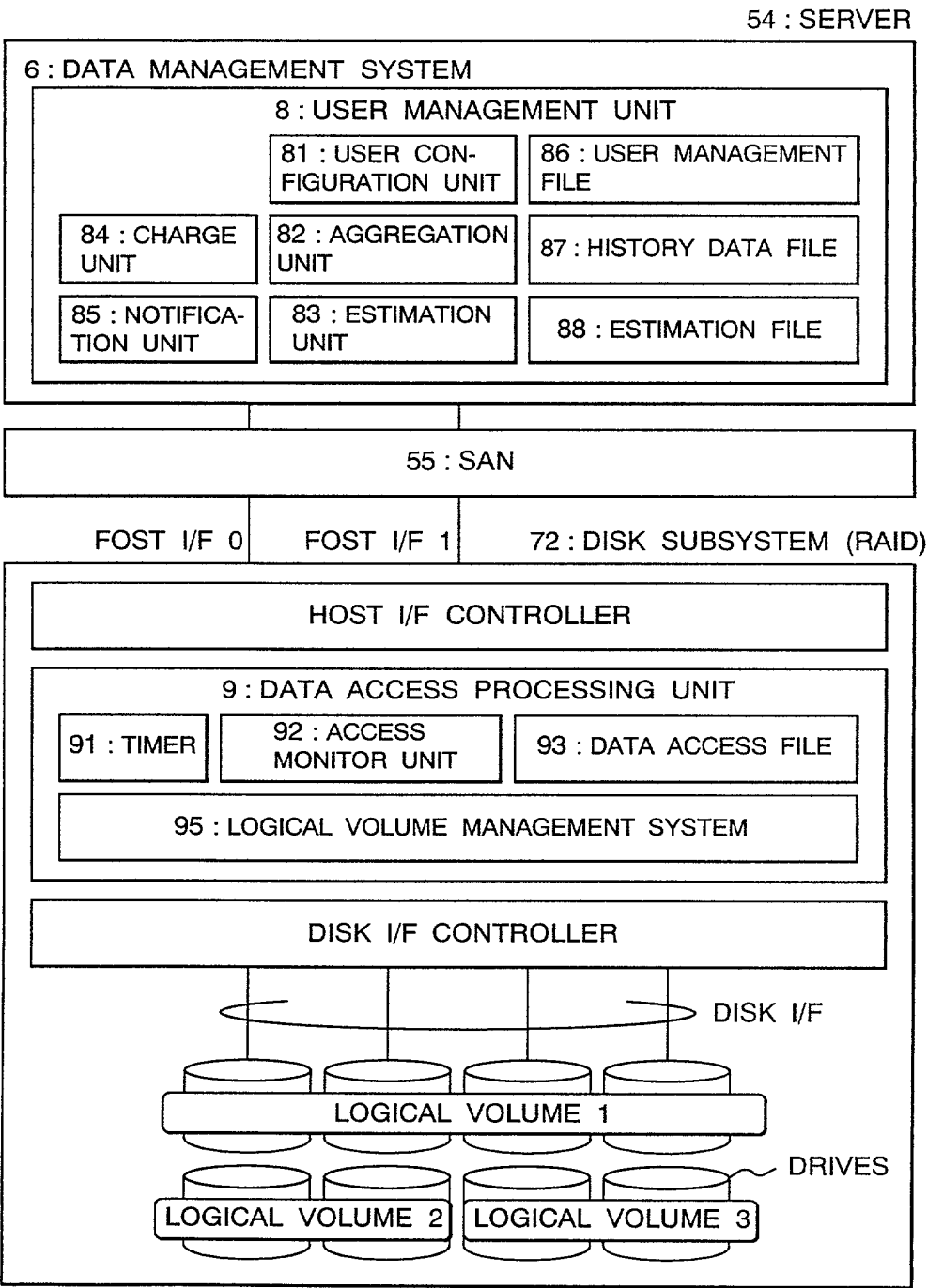


FIG. 21



**FIG. 22**

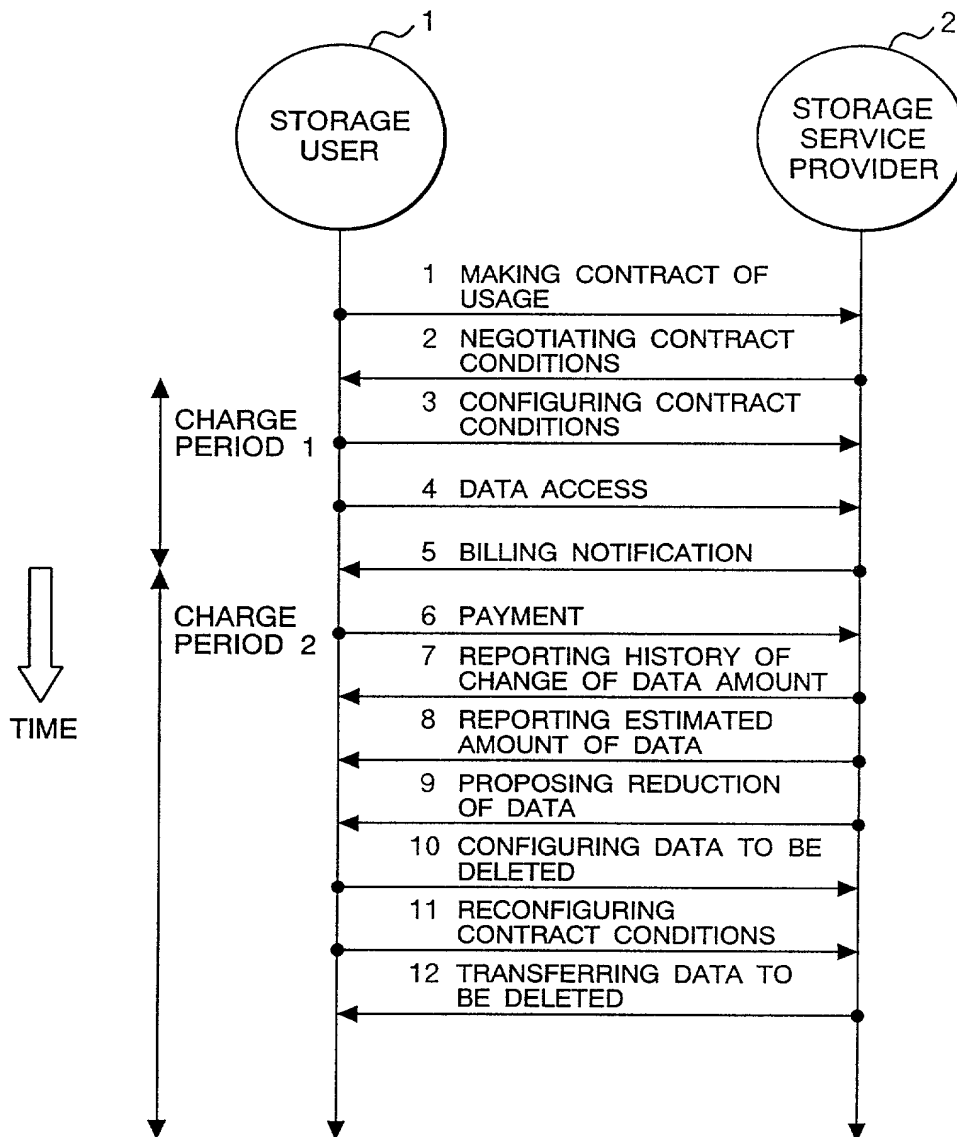
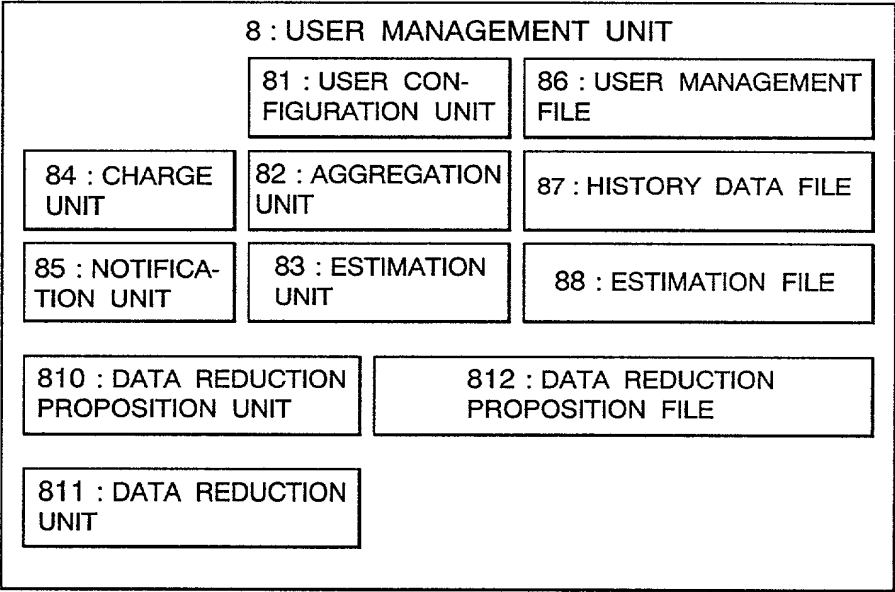


FIG. 23



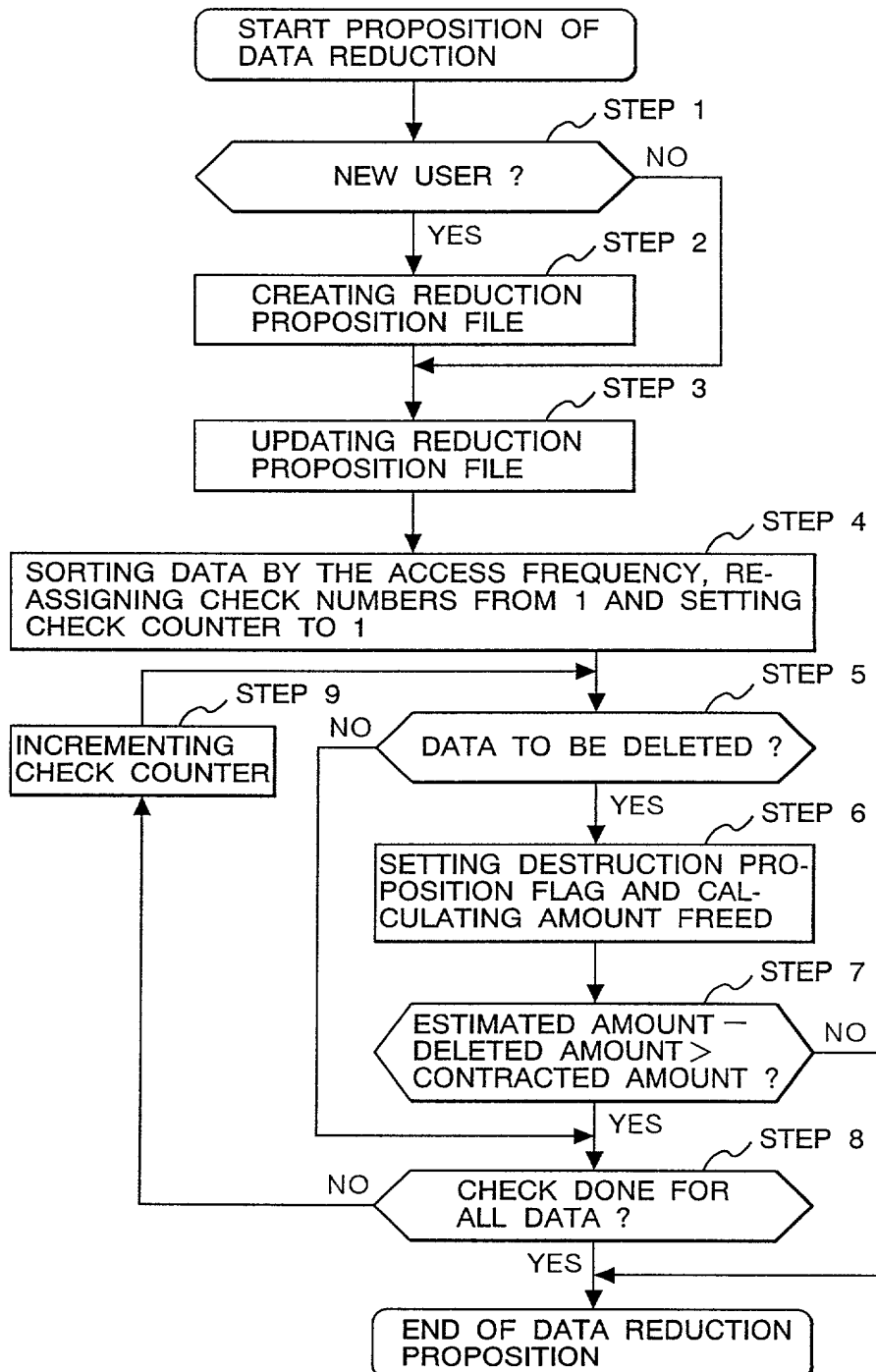
**FIG. 24**

812: DATA REDUCTION PROPOSITION FILE

[illegible]



**FIG. 25**



102050 00000000

**FIG. 26**

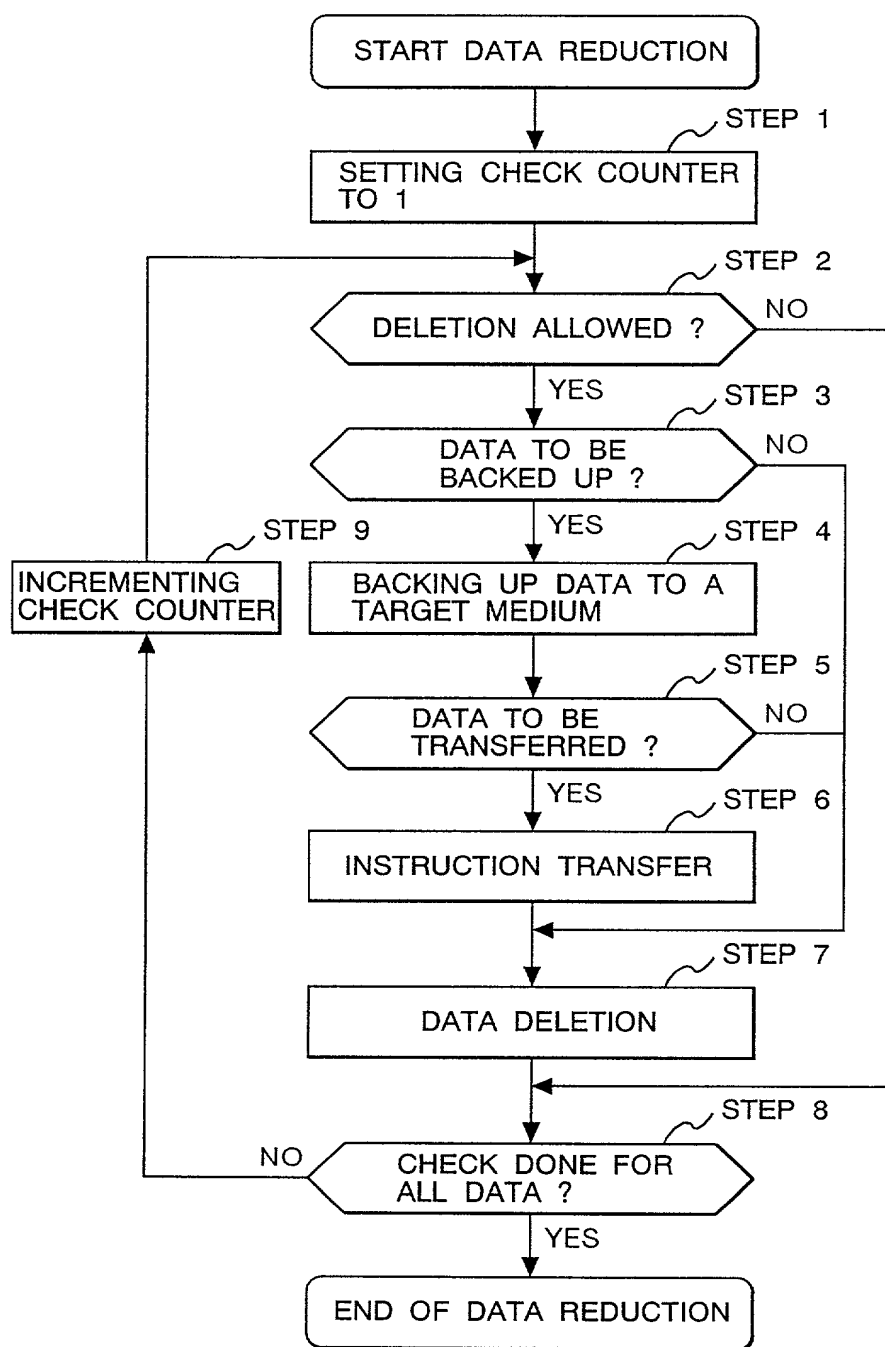



FIG. 27

340 : DATA REDUCTION PROPOSITION DISPLAY

















 CLICK BUTTON TO SELECT ITEM TO BE DELETED

SELECT A BACKUP MEDIUM (TAPE OR CD-R)

341 : PROPOSITION LIST

CHECK NUMBER	STORAGE AREA	NAME OF DATA	NON-DELETION OBJECT	DELETION PROPOSED	SUM AFTER DELETION
1	1	1	NON-DELETION	—	0GB
2	1	2	DELETION	PROPOSITION	100GB
3	1	3	DELETION	PROPOSITION	200GB
4	2	4	DELETION	—	200GB
⋮	⋮	⋮	⋮	⋮	⋮

342 : DELETION CONFIGURATION

SET DELETION	NON-DELETION OBJECT	BACK-UP	BACK-UP MEDIUM	TRANSFER DATA TO BE DELETED
				
				
			TAPE	
				
⋮	⋮	⋮	⋮	⋮

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ACTUAL AMOUNT OF DATA USED =600GB

ESTIMATED AMOUNT IN A MONTH =750GB

PRESENTLY CONTRACTED AMOUNT =700GB

PROPOSED AMOUNT OF DATA =800GB

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SUM OF DATA TO BE DELETED =200GB

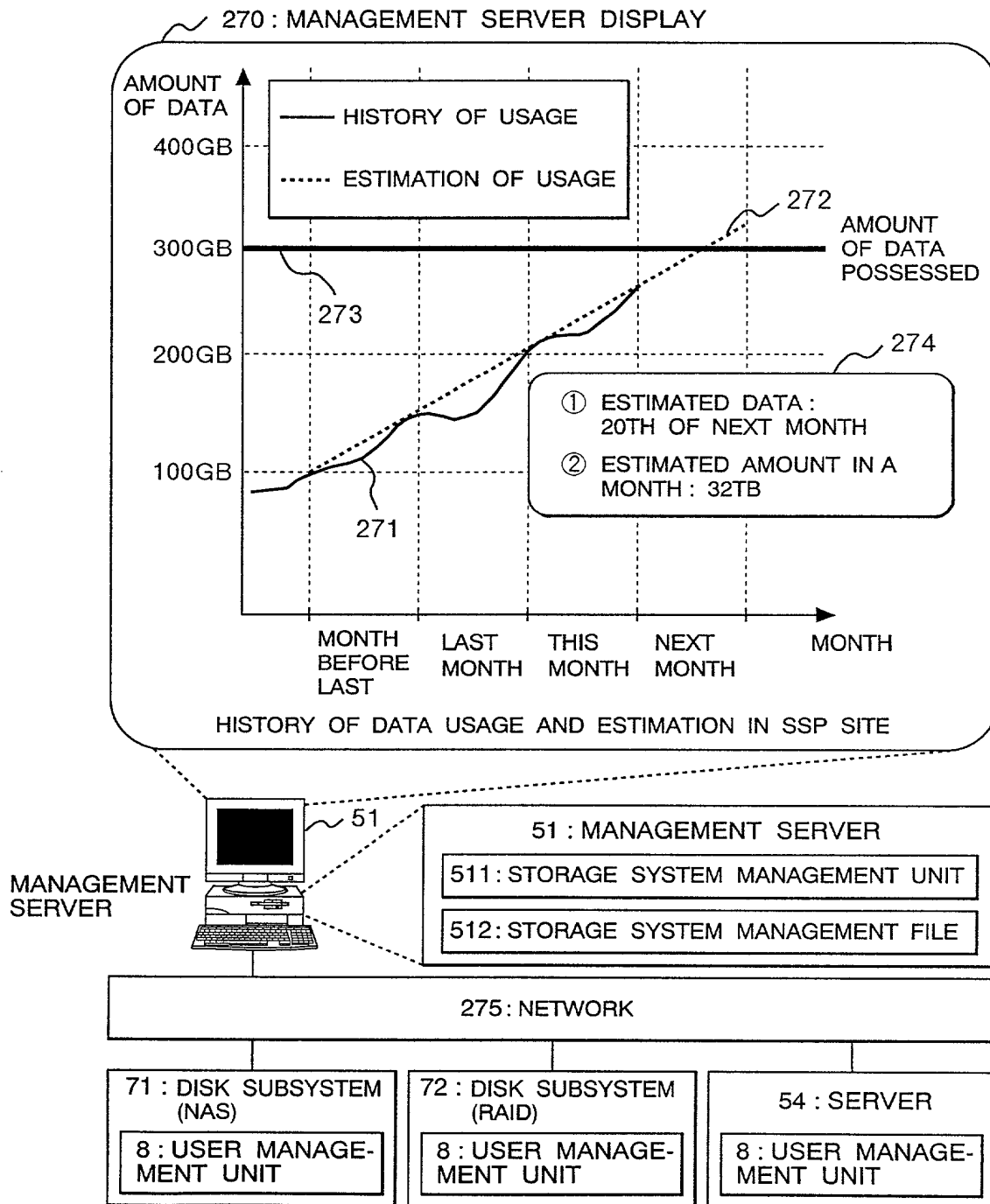
ENTER DESIRED AMOUNT OF DATA

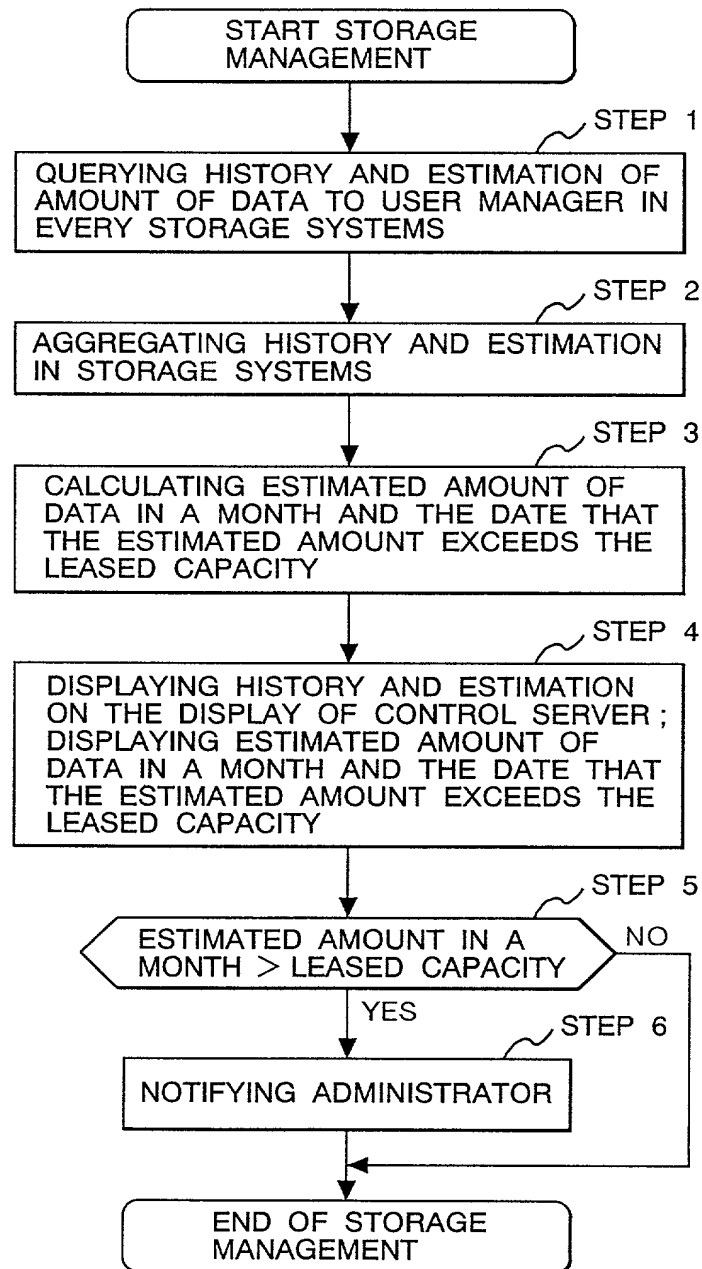
800GB 345

OK 346

FIG. 27: Data Reduction

**FIG. 28**



**FIG. 29**

**FIG. 30**

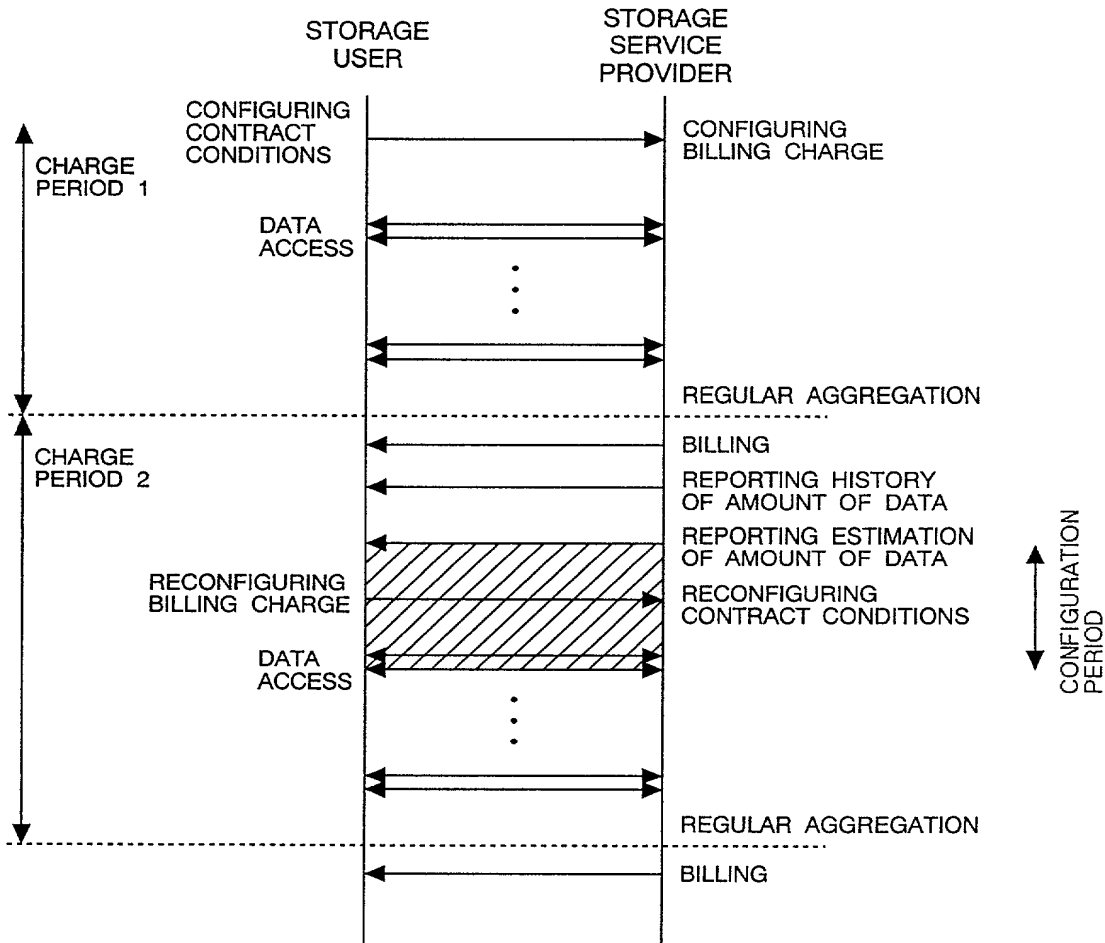


FIG. 31

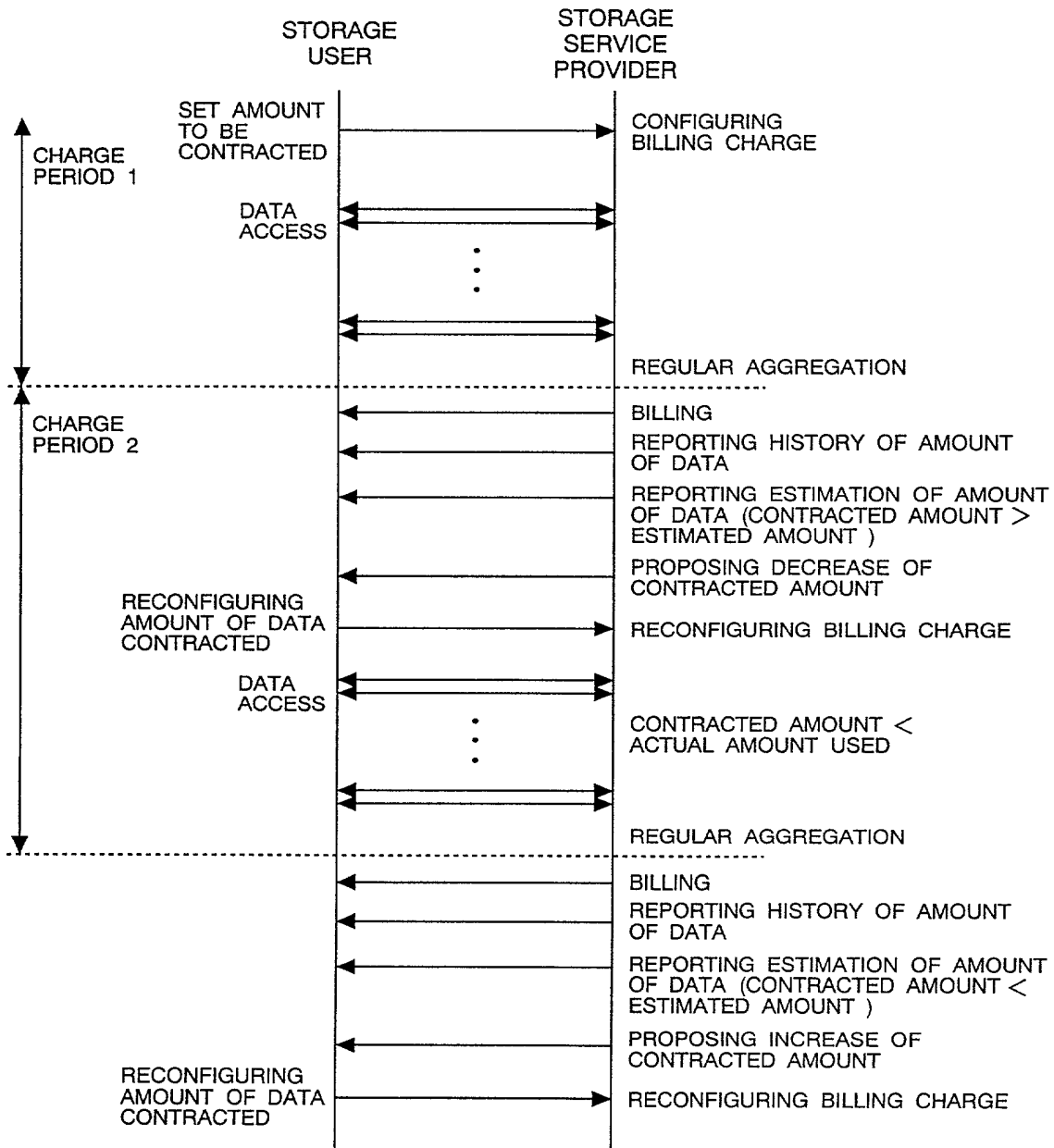


FIG. 32

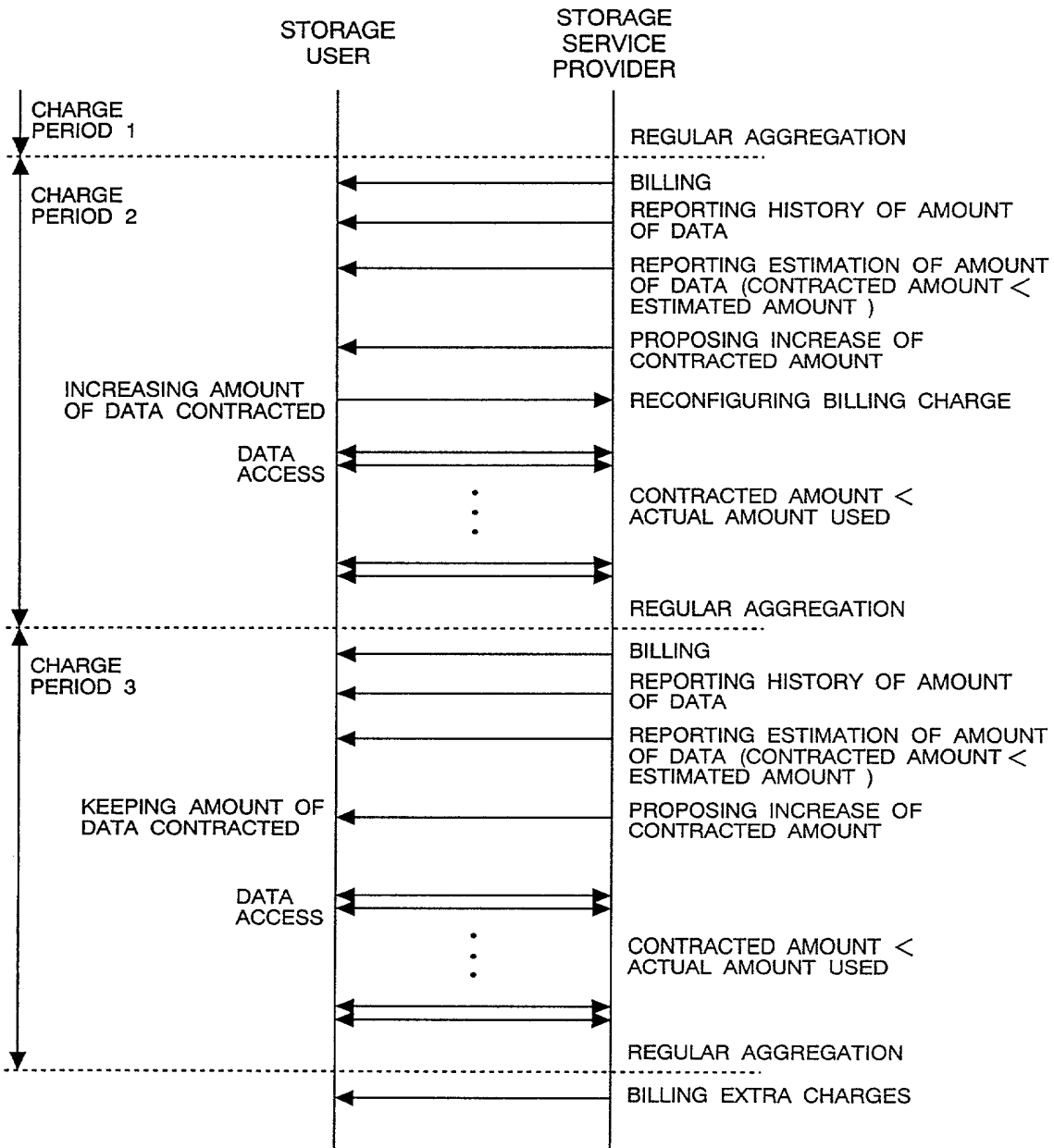




FIG. 33

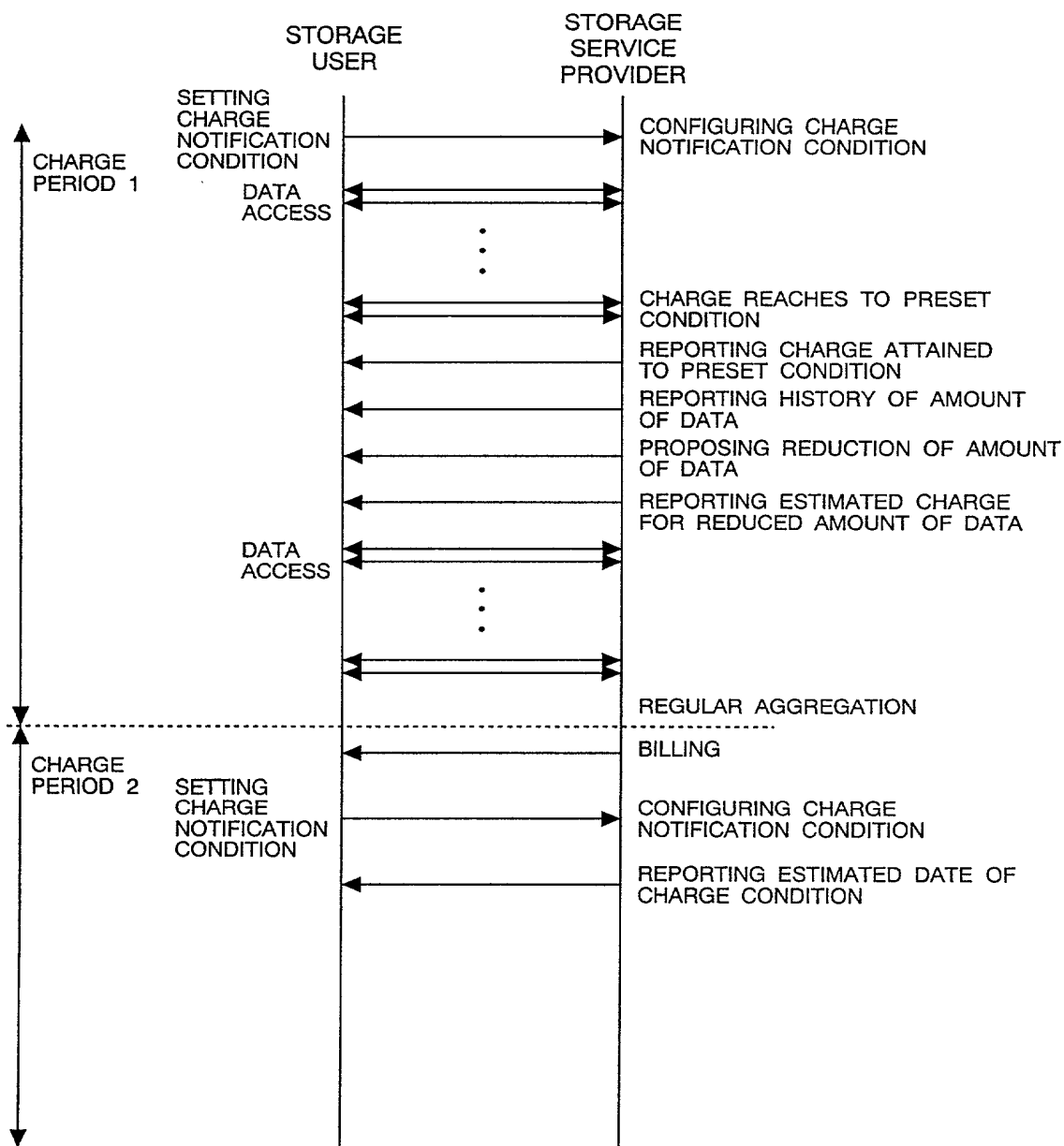
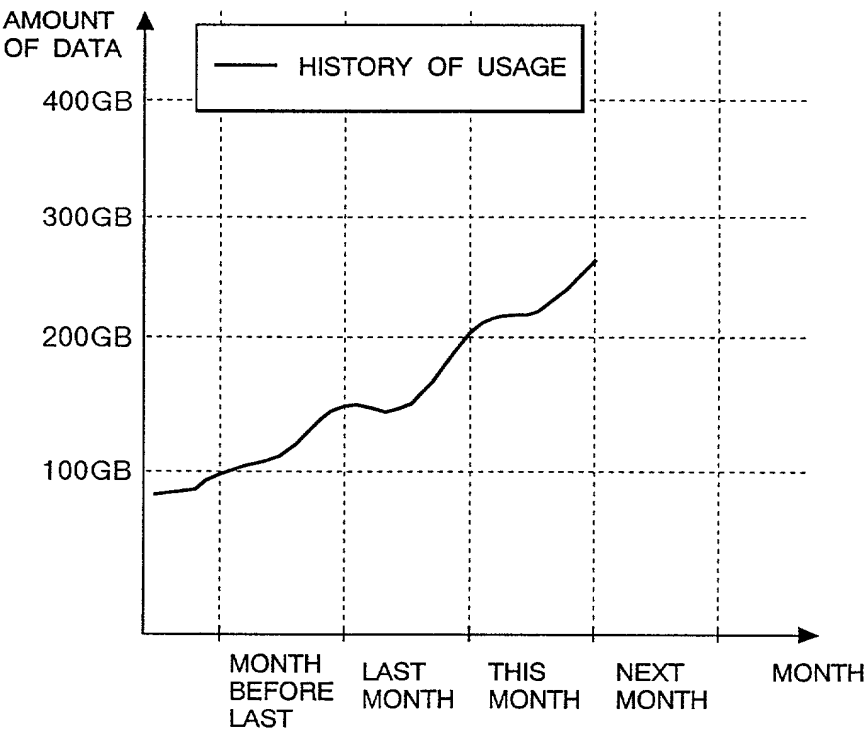


FIG. 34

PRIOR ART



[illegible]


**Honorable Assistant Commissioner  
for Patents  
Washington, D.C. 20231**

Sir:


In the matter of the above-captioned application for a United States patent, notice is hereby given that the Applicant claims the priority date of April 16, 2001, the filing date of the corresponding Japanese patent application 2001-116435.

The certified copy of corresponding Japanese patent application 2001-116435 is submitted herewith. Acknowledgment of receipt of the certified copy is respectfully requested in due course.

Respectfully submitted,



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(703) 641-4200  
**August 2, 2001**

# **PATENT OFFICE**

## **JAPANESE GOVERNMENT**

This is to certify that the annexed is a true copy of the following application as filed with this office.

Date of Application : April 16, 2001  
Application Number : Patent Application No. 2001-116435  
Applicant (s) : Hitachi, Ltd.

Dated this 28th day of June, 2001

---

Kouzou OIKAWA  
Commissioner,  
Patent Office

Certificate No. 2001-3061063